# Envisioning an Improved Continuum of Special Education Services for Students with Learning Disabilities: Considering Intervention Intensity

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Christopher J. Lemons

Peabody College of Vanderbilt University

Sharon Vaughn

University of Texas at Austin

Jade Wexler

University of Maryland

Devin M. Kearns

University of Connecticut

Anne C. Sinclair

Peabody College of Vanderbilt University

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Abstract

In *Endrew F. v Douglas County School District RE-1,* the U.S. Supreme Court affirmed the requirement that schools provide special education services designed to confer education benefit that is more than de minimus. *Endrew* offers an opportunity for the special education community to consider whether students with learning disabilities have access to a full continuum of services, including individualized, data-driven, and intensive interventions. We examine predominant models of service delivery, highlight concerns that these are insufficient, and envision an improved continuum of services better aligned with the raised expectations of *Endrew*. We also highlight important barriers that need to be addressed before an improved continuum can be implemented in many schools in the U.S.

# Envisioning an Improved Continuum of Special Education Services for Students with Learning Disabilities: Considering Intervention Intensity

The provision of a free and appropriate public education (FAPE) to students with disabilities has been a key tenet of special education legislation since the implementation of the Education for All Handicapped Children Act (EAHCA, 1975) and it has remained so in subsequent versions of the Act (i.e., Individuals with Disabilities Education Act [IDEA], 1990, 2004). However, the level of educational benefit necessary to satisfy FAPE has been a controversial, often litigious, issue. As Yell and Bateman (2017) described, U.S. Courts of Appeals have interpreted the educational benefit standard in two primary ways. The *Lower De Minimis Standard*, requiring only that special education services "confer educational benefit that is slightly more than trivial or de minimus" (p. 10), and the *Higher Meaningful Benefit,* specifying that special education services that bestow "merely more than trivial educational benefit" (p. 10) are insufficient and do not satisfy FAPE.

On March 22nd, 2017, the U.S. Supreme Court's unanimous decision in *Endrew F. v. Douglas County School District RE-1* (2017; henceforth, *Endrew*) set forth a clear rejection of the de minimis standard and effectively established a new, higher benchmark for special education. As Chief Justice Roberts explained in the Court's opinion:

> When all is said and done, a student offered an educational program providing "merely more than *de minimis*" progress from year to year can hardly be said to have been offered an education at all. For children with disabilities, receiving instruction that aims so low would be tantamount to "sitting idly . . . awaiting the time when they were old enough to 'drop out.' The IDEA demands more. It requires an educational program reasonably calculated to enable a child to make progress appropriate in light of the child's circumstances (*Endrew*, 2017, p. 4-5).

The opinion makes it clear that schools are now to be held accountable for monitoring student progress and for efficiently and effectively adjusting services when poor response is

demonstrated. Implications go further, however, and suggest that educators should devote time to "candid introspection" (Turnbull, Turnbull, & Cooper, 2018; p. 134) and consider how to improve the ways that special education services are designed and delivered.

We believe *Endrew* offers a timely opportunity for members of our field to reflect and look forward. Our aim is to consider the special education services currently provided to students with learning disabilities (LD), to examine related outcomes, and to suggest a re-envisioned continuum of services for students with LD. We have a specific aim of highlighting the need for schools to ensure that students with LD with severe, persistent academic and behavioral needs have access to interventions that are of sufficient intensity to satisfy *Endrew's* raised expectations. We discuss extant barriers that prohibit many schools from providing services that are aligned with our continuum and offer suggestions for removing these barriers. Future directions for research are also discussed.

We focus on students with LD for three reasons. First, students with LD make up the largest group of children and youth between the ages of 3 and 21 years served under IDEA. In 2014-2015, 35% of the 6.6 million students receiving special education services were students with LD (McFarland et al., 2017). Second, there has been a trend over the past decade to increase the percentage of time students with LD spend in general education settings. Currently, most students with LD are taught in the general education classroom for the majority of their school day. In the 2015-2016 school year, 70.9% of students with LD spent 80% or more of their time in the general education classroom; in 2008, the percentage was 61.6% (Horowitz, Raw, & Whittaker, 2017). Despite this increasing amount of time spent in general education settings, academic outcomes for students with LD remain poor. For example, 97% and 91% of 4$^{th}$ graders with LD performed below proficient in reading and math, respectively; 96% of 8$^{th}$ graders with

LD performed below proficient for each subject. Further, only 70.8% of students with LD graduate with a regular diploma compared to a rate of 82.3% for all students (Horowitz et al., 2017). Third, most students with LD exhibit what might be considered "invisible disabilities" meaning that while their learning challenges are real and debilitating, they may be less obvious than challenges faced by individuals with physical and intellectual disabilities.

**What is Special Education Supposed to Be?**

Over the past 50 years, special educators have been discussing and offering models for effectively instructing students with disabilities, many of which include a continuum of placement options (Deno, 1970). For example, in 1962, Reynolds suggested a framework for considering the various levels of intensity needed in special education using a triangle to depict the relation between complexity and severity of students' needs and the levels of special services they require. In his framework, Reynolds proposed that the most restrictive environments (e.g., hospital and treatment centers, hospital schools, residential schools, and special day schools), conceptualized as the tip of the triangle, would be used by the fewest number of students who had the most significant needs. The middle of the triangle represented students with moderate to severe needs and students would either be in full-time or part-time special education classrooms (e.g., resource room) in a general education school setting. The base of the triangle represented the majority of special education students who would be provided services in the general education classroom with supplementary teaching and/or consultation.

The original rationale for a continuum of services was that intervention services of increasing intensity would be provided if inadequate student response was demonstrated. In other words, intensity of intervention would be increased until a student was responsive. In 2001,

Zigmond provided a description of special education services designed to adapt in relation to poor student response to ensure positive outcomes:

> "Special education is, first and foremost, instruction focused on individual need. It is carefully planned. It is intensive, urgent, relentless, and goal-directed. It is empirically supported practice, drawn from research. To provide special education means to set priorities and select carefully what needs to be taught. It means providing a special curriculum—one not available to other students—taught in a special way, using different texts, different ways of presenting the information, different pacing of instruction, different amounts of guided practice, different examinations, different grading standards. It means setting specific (and sometimes different) curriculum goals for each student through the writing of his or her annual IEP. It means monitoring each student's progress and taking responsibility for changing instruction when the monitoring data indicate that sufficient progress is not being made. It means providing students who have learning and behavioral disorders with something truly special" (p. 73).

Unfortunately, she also reflected that special education services aligned with her description were "nowhere to be found" at the time (p. 73).

The poor outcomes of students with LD coupled with *Endrew's* increased expectations raise several important questions: Are schools currently providing special education services that align with Zigmond's description? Is a full continuum of services available to students with LD? Do students with LD with severe, persistent academic and behavioral deficits have access to interventions that are reasonably calculated to meet their needs? Next, we explore these questions by providing a brief description and critique of predominant service delivery models.

**Predominant Models of Service Delivery**

It is difficult to obtain clear data regarding specific instructional models that schools are implementing to support students with LD. Based on our professional experiences working in and with schools and data from observational studies (e.g., Swanson & Vaughn, 2010), students with LD seem to receive services in four primary placements: the general education classroom, the co-taught general education classroom, the general education classroom with supplemental

support (e.g., Tier 2[1]), and the special education resource room. Paraprofessionals often provide support in the latter; thus, we also briefly overview their role in special education instruction.

Schools are increasingly implementing Response-to-Intervention (RTI) or Multi-Tiered Systems of Support (MTSS) to efficiently provide students with interventions of increasing intensity and to identify students who are insufficiently responsive as having LD (Hudson & McKenzie, 2016). Accordingly, we think it will be helpful to consider how the four primary placements are often positioned within RTI and MTSS systems and to later highlight the contrasting positioning of services outlined in our proposed continuum (See Figure 1).

<INSERT FIGURE 1 ABOUT HERE>

In our experience, schools that are implementing RTI or MTSS frequently provide Tier 1 core classroom instruction and one or more tiers of supplemental general education intervention (e.g., Tier 2). Students with LD may receive services in Tier 1 classrooms (including co-taught instruction) and may also participate in the supplemental general education interventions. Additionally, students with LD may receive intervention in special education resources rooms. In our figure, this service is depicted in a circle disconnected from the triangle as, in both our experience and initial research (National Center on Intensive Intervention, 2013; Slanda, 2017), special education services are rarely integrated into the larger RTI or MTSS framework.

**General education classroom.** Students with LD who receive instruction in this model typically participate primarily in the same instruction as their peers without disabilities. General educators are often required by the IEP to provide instructional accommodations and

[1] Note, we are using the standard protocol framework of RTI (Kearns, Lemons, Fuchs, & Fuchs, 2014; Fuchs, Mock, Morgan, & Young, 2003) that includes universal instruction at Tier 1 and supplemental intervention at Tier 2, both provided in general education settings. We consider Tier 3 to be individualized, intensive intervention provided in a special education setting. In states that have an RTI model that includes additional tiers of supplemental intervention in general education settings, those tiers would be included in our definition of general education supplemental support.

differentiated instruction – though these instructional requirements are often underspecified. Special educators may offer support in understanding the IEP requirements and/or adapting assignments, but the placement we are describing is one where the general educator implements part of the IEP without the assistance of the special educator. Despite pervasive implementation of inclusive programming, research support for improved student outcomes in this setting is limited. Results indicate that inclusive programming in the general education setting is only moderately effective for some students with disabilities (Volonino & Zigmond, 2007).

Observational studies of instructional practices in the general education setting have found a lack of individualized accommodations or instruction for students with LD (e.g., Wexler, Mitchell, Clancy, & Silverman, 2016). For example, McIntosh et al. (1993) observed more than 60 teachers who had at least one student with LD in their general education classroom and showed that students with LD received mostly undifferentiated instruction. Compared with their peers without LD, they were also less engaged, contributed less, and asked fewer questions. Data from the NLTS-2 documented that general educators report providing substantial modifications to only 11% of students with LD (Wagner et al., 2005).

The lack of differentiation for students with disabilities may be due in part to a lack of preparation for general educators. General educators frequently perceive that they are unprepared to effectively teach students with disabilities. This could be in part because few, if any special education courses are required in general educator preparation programs (Kosko & Wilkins, 2009). It is also worth considering how much instructional time general educators have to provide the individualized intervention to students with LD in their classes.

**Co-taught general education classroom.** Co-teaching is a popular service delivery model, partly because it provides a way to implement inclusion. Since the Regular Education

Initiative of the 1980s (see Fuchs & Fuchs, 1994), inclusion has been touted as an egalitarian alternative to instruction provided outside the general education classroom. The argument is that "pull out" instruction—that is, a resource room model—needlessly singles students out from their peers without disabilities. In co-taught classrooms, students with LD can be included in general education throughout the day with all necessary specialized instruction provided by the special educator "pushing in." In other words, the special educator works within the general education setting to provide students with LD with specialized instruction.

Co-teaching takes the "push in" model one step further by calling for special and general educators to share teaching responsibilities. In the co-taught classroom, the special educator should have multiple roles, only one of which is as the provider of specialized instruction (Murawski & Lochner, 2011). In terms of role assignment, co-teaching involves some combination of configurations (e.g., one teach-one assist, station teaching, parallel teaching, team teaching; Cook & Friend, 1995). In theory, instruction involves a fluid combination of role assignments, chosen strategically to match the needs of the students for a given lesson. Co-teaching also includes: (a) collaborative planning, (b) a strong, positive relationship between teachers, and (c) agreed-upon roles and responsibilities (e.g., Sileo, 2011).

Co-teaching seems to support the egalitarian aims of inclusion, but the data on student achievement in co-taught classrooms are very limited. In a meta-analysis by Murawski and Swanson (2001) the mean effect size of 0.40 was for intra-individual comparisons in only six studies that did not include random assignment. To date, there are still no data that support causal inference – that is that co-teaching leads to improved outcomes for students with disabilities.

One central issue is that co-teachers most frequently use the co-teaching approach that co-teaching advocates recommend least—one teach-one assist (Scruggs, Mastropieri, &

McDuffie, 2007; Solis, Vaughn, Swanson, & McCulley, 2012). In this arrangement, the special educator almost always serves in the "assist" role and takes on the role of assistant (e.g., monitoring behavior, helping struggling students; Buckley, 2005; Zigmond & Matta, 2004). Bottge, Cohen, and Choi (2018) observed that co-teachers used the one-teach-one assist model 44% of the time. One purported benefit of co-teaching is that students can receive small-group instruction in homogeneous groups, but teachers rarely take advantage of this opportunity, with as little as 12% of class time involving any individualized instruction (Newman, 2006). In addition, recommended co-teaching models require voluntary collaboration supported by common planning time, but teachers often report that they are required to co-teach with little choice in their partner and that they have almost no planning time (Wexler et al., 2016).

Co-teaching has a further limitation in that it often does not involve specialized instruction, and the delivery of instruction may not occur in the way that students with disabilities make the best progress (Zigmond & Kloo, 2011). For example, studies have shown repeatedly and conclusively that instructional approaches involving modeling, scaffolded practice, increased opportunities to respond, and immediate feedback benefit students with disabilities (MacSuga-Gage & Simonsen, 2015; Rosenshine, 2012; Ticani & De Mers, 2016). These approaches are less common in general education: Pedagogical methods in many areas of general education eschew these methods—favoring problem-based self-directed inductive learning over approaches that involve teacher-managed instruction.

However, self-directed approaches are not nearly as effective for students with disabilities, and some data (e.g., Fuchs et al., 2015) indicate that instruction using these methods hinders learning of students with very low achievement. This is worthy of serious consideration:

If general educators are using methods that are ineffective for students with disabilities, it is very problematic to place students with LD in this setting for their entire instructional day.

**General education supplemental support.** Although schools are increasingly integrating RTI and MTSS into their instructional delivery systems, the implementation has been highly variable across schools and states and there are no clear data to document the frequency with which students with LD participate in supplemental general education interventions (Bineham, Shelby, Pazey, & Yates, 2014; Hudson & McKenzie, 2016). Shapiro (2014) recommended that special education services could be integrated across the various tiers of RTI and MTSS as long as the instruction within the tier was matched to the student's instructional needs. He suggested that schools consider how to best fit students with IEPs into school-wide models as a way to efficiently meet the needs of a greater number of students. He noted that for many students with disabilities, the instructional focus of general education supplemental intervention could be highly appropriate. Although we are unable to document the frequency that students with LD are placed in general education supplemental interventions, we have conducted research in schools where this placement has occurred. Unfortunately, the decision to involve students with LD in RTI and MTSS systems appears unsystematic, as variable as overall implementation of the models, and not well documented by current data systems. Thus, it is currently unclear how effective it is to involve students with LD in supplemental support provided in general education through RTI and MTSS.

**Resource room.** In schools that use the resource room setting, the expectation is that special educators will remove students with LD from the general education classroom for limited amounts of time and provide specialized instruction to meet their individual needs. The amount of time students spend in resource rooms ranges from less than an hour several times per week to

multiple hours per day. The instruction provided may replace academic instruction in the general education classroom, supplement it, or involve some of both. The intent of resource rooms is to "provide a setting where teachers could work with students either in small groups or individually, and thus provide them with an intensive, individualized program of study" (Moody, Vaughn, Hughes, & Fisher, 2000; p. 305). Though there is little guidance for resource room teachers, the general practice is for teachers to deliver instruction aimed at teaching foundational skills to enhance students' ability to benefit from general education instruction. Many students are placed in resource rooms because they are performing substantially below grade-level and the IEP team has decided that pull-out instruction could be beneficial. There is evidence that students with disabilities who receive instruction in a resource-type room can, on average, outperform students placed in the general education setting (e.g., Bottge et al., 2018). However, there is limited information on the efficacy of the resource room model in practice.

Vaughn and colleagues (e.g., Moody et al., 2000; Vaughn, Moody, & Schumm, 1998) conducted several observation studies in resource rooms examining the instruction of students with LD. Results consistently documented predominantly large-group instruction (i.e., 5 to 19 students) with limited differentiation of instruction or materials. Students in the studies also demonstrated inadequate progress in reading over a school year. Swanson (2008) synthesized 21 observation studies focused on reading instruction provided to students with LD in grades K-12. Results indicated that reading instruction was generally of low quality, delivered to large groups, and had limited alignment with research-based reading recommendations.

In a more recent observation study, Swanson and Vaughn (2010) documented resource room reading instruction provided to 2nd-5th graders with LD. On-task behavior of teachers and students was higher than previous reports; additionally, average to high-average quality

instruction in many areas of reading was observed. Instruction was predominantly delivered to whole groups ranging from one to seven students. The authors concluded that "although it is evident that research-based practices are more frequently observed in resource rooms now than a decade ago, there is still progress to be made" (p. 491).

**Paraprofessionals in special education.** Data are not available to determine what percentage of paraprofessionals support students with LD compared to other disabilities. Data indicate that more than 450,000 full-time equivalent paraprofessionals provide services to children with disabilities in U.S. schools (U.S. Department of Education, 2015). Most schools employ 8% more special education paraprofessionals than special educators (Giangreco, Hurley, & Suter, 2009). These paraprofessionals devote substantial time to working closely with students with disabilities—97% report providing one-on-one instruction to students multiple times during the week (Carter, O'Rourke, Sisco, & Pelsue, 2009). Schools' use of paraprofessionals to provide direct instruction to children with disabilities continues to increase due to standards-based reforms, changing service delivery models, and economic pressures (Giangreco & Broer, 2005; Walker & Smith, 2015). Unfortunately, most paraprofessionals have never received in-service training on basic instructional strategies—meaning they are likely being underutilized (Brock & Carter, 2015; Giangreco, Edelman, Broer, & Doyle, 2001).

**Summary of predominant service delivery models.** If, as we hypothesize is the case in most schools, these models comprise the full continuum of special education services available to students with LD, this is problematic in that it lacks sufficient intensity to meet the needs of many students with LD. Specifically, none of these models are designed to allow special educators to meet the needs of students with LD with intensive needs. We suggest that special education is obligated to do better.

## An Improved Continuum of Services

Envisioning an improved continuum of special education services available to students with LD represents one path forward for improving outcomes. The increased expectation from *Endrew* that IEPs need to be reasonably calculated to lead to educational benefit together with the poor outcome data for students with LD suggests the time is right to reflect and make improvements. From our perspective, it appears that current instructional models lack intensity and that a full continuum of services is not readily available. Notably, we suggest that too few students with LD have access to intensive intervention services from special educators that are data-based, individualized, and iterative in the approach to meeting student needs.

Next, we describe the instructional approach of each level of our proposed continuum and posit why the approach may represent an improvement over the status quo. In this model, we hypothesize that special educators would be responsible for either Levels One and Two or Level Three. We make this recommendation to allow special educators to specialize their skills, differentiate their responsibilities, and allocate sufficient time to appropriately address the special needs of students. We also acknowledge that various other models could be proposed that would meet the same aim. Our intention is to provide an example of a model that may serve as a heuristic. Finally, we recognize that important, fundamental barriers are currently in place that preclude implementation of our proposed model in a majority of schools in the United States. We address these barriers following the description of the continuum.

In an effort to reinvigorate discussion around service delivery, we propose a three-level continuum of special education services that would be available to all students with LD. Our proposal is designed to increase instructional intensity at each level and to ensure that the most

intensive level is sufficiently resourced to allow clinical experts to deliver intensive intervention either one-on-one or in small groups (i.e., three or fewer students).

As we did when we described predominant models of service delivery for students with LD, we position each of the levels within RTI and MTSS frameworks (see Figure 2). Level One (Data-Supported Consultation) and Level Two (Enhanced Co-Teaching) are depicted as supports for students with LD across all general education RTI and MTSS tiers. In other words, we agree with Shapiro's (2014) recommendation that students with LD should be included in these intervention tiers when appropriate to meet their instructional needs, and we believe that special educators could offer support to students with LD across all levels of the models. Level Three (Intensive Intervention with Enhanced Paraprofessional Support) is shown as a triangle that is now connected to the lower triangle. Our aim here is to highlight that this level of intervention should represent the most intensive, individualized instruction in the school and that there should be a well-connected system of communication between educators across the various levels.

<INSERT FIGURE 2 ABOUT HERE>

**Level One: Data-Supported Consultation**

Currently, students with LD receive little differentiated instruction in the general education setting (Swanson, 2008). The role of the special educator for students with LD receiving instruction in the general education setting is vague. Often, special educators provide minimal support to general educators beyond: (a) providing a list of accommodations required for each student, and (b) suggesting modifications to instruction or assignments to increase student performance. Frequently, these accommodations and modifications are selected haphazardly and are not derived from evidence or data (Fuchs & Fuchs, 2001). Since general educators have minimal training and expertise in the specific challenges students with LD face,

special educators may need to take a more active role in the collection and interpretation of data to support appropriate accommodations and modifications for each student.

We propose an intensified role for the special educator in supporting students with LD in general education classrooms (Level One). This role is necessary to more effectively support students in these classrooms. Researchers have consistently advocated for matching academic and behavioral interventions to student needs based on data (Burns, Riley-Tillman, & VanDerHeyden, 2012). This is also true for accommodations (Fuchs, Fuchs, & Capizzi, 2005).

Our first suggestion is that special educators base their recommendations for accommodations and modification upon student response data. Under our proposed structure special educators would be responsible for collecting data on the provision of specific accommodations (or modifications), assessing whether the selected accommodations improved student performance, and, if not, adapting provided accommodations accordingly. Special educators in this role could use an applied single-case design method (SCD; Riley-Tillman & Burns, 2009) to experimentally evaluate changes put in place to enhance student performance. Brief experimental analysis (BEA; Martens & Gertz, 2009) is one SCD tool special educators could use to inform decisions about students who are demonstrating insufficient response to general education instruction. BEAs use SCD elements to quickly evaluate effects of multiple interventions on a student's behavior. These designs are also highly applicable to evaluating accommodations and modifications provided in the general education classroom. Integrating data-driven experimentation into the consultation role of the special educator will likely improve outcomes and clarify the special educator's role.

Another means of selecting appropriate accommodations based on data would be to use a brief, validated assessment tool. For example, *Dynamic Assessment of Test Accommodations*

(DATA, Fuchs, Fuchs, Eaton, & Hamlett, 2003) allows teachers to quickly assess which accommodations produce improved student results with a brief series of tests administered with and without accommodations. After administering the assessment, the teacher evaluates the individual student's improvement in score due to specific accommodations and selects the accommodation that was associated with greater improvement than that demonstrated by peers without disabilities in the normative sample (Fuchs & Fuchs, 2001).

Our second recommendation is for special educators who are providing consultation support to establish a frequent, systematic communication system with the general educator. Frequently, IEPs include a brief amount of consultation time (e.g., 15 min per week) for the special educator to provide support. However, this time is rarely used productively nor is it closely monitored. The consulting special educator should establish a clear schedule for observing the target student, providing data and written input to the general educator, and placing frequent in-person meetings on the calendar to review progress. Administrators should ensure that sufficient time for these activities is allocated in teachers' schedules. Increasing the structure of the consultant role will enhance effectiveness.

Our Level One model is an improvement over the current structure because it gives the special educator a clearer purpose in supporting students in the general education setting. The role of the special educator is clarified for the general educators, increasing the likelihood that they perceive the special educator as a resource. Through this model general educators are supported by intervention and accommodation experts (special educators) via data collection and decision making. Further, this support is provided across all tiers of general education, decreasing the number of students with LD who would need the most intensive services (e.g., Level Three). Relatedly, while this level of the model is focused on the role of the special

educator, the expectation is that general educators would also be more adequately prepared to instruct students with LD in their classrooms. One aspect of this preparation would be to ensure that the general educators respect the role of the special educators by trusting in the data the special educator provides and being willing to make changes based on her or his recommendations. Finally, because this model is data-driven, it adheres to the expectations outlined in *Endrew* to improve individual student outcomes.

**Level Two: Enhanced Co-Teaching**

As we highlighted above, current models of co-teaching are limited due to unspecified roles of teachers, a lack of planning time, and insufficient support for lower-performing students. An intensified model of co-teaching is needed to overcome each of these challenges. One primary improvement would be to ensure that expertise of both general and special educators is employed. Enhanced co-teaching models would: (a) have clearly established roles and responsibilities for both teachers, (b) allocate sufficient time and provide a clear structure for co-planning, (c) incorporate features of effective instruction (e.g., providing sufficient opportunities to respond), (d) provide a model for using student data to differentiate instruction, (e) ensure consistent classroom management systems to support behavior challenges, and (f) structure instruction to allow for differentiation to support learning of lower performing students.

One example of this type of co-teaching model is represented by Project CALI (Content Area Literacy Instruction), a professional development model being developed under the auspices of an Institute of Education Sciences Goal 2 Development Grant (R324A15018). The aim of the project is to address middle school students' poor literacy and academic achievement by providing content area co-teachers with a model for structuring their instruction. Our model involves professional development for co-teachers to implement two components: The CALI

Instructional Framework and a Planning Process. The Instructional Framework is aimed at increasing literacy instruction and intervention provided within the content area class. Co-teachers learn to implement a carefully selected set of evidence-based adolescent literacy strategies designed to help students read and comprehend texts in the content area class. The Instructional Framework also includes data-based intervention support designed to give each teacher a specific role in targeting students' individual needs through differentiated instruction delivered using a station teaching model. The teachers learn how to use student performance data to make decisions about the level of support each student requires. This support is then provided during a structured differentiated learning activity within the class.

During differentiated instruction, students are divided into three groups based on recent progress monitoring data. In a sense, this model integrates instruction that is traditionally provided in supplemental reading interventions (e.g., Tier 2) into the general education classroom to meet the needs of struggling readers. This targeted support time also includes opportunities for students with the strongest reading skills (regardless of disability status) to read complex texts that extend learning found in the core CALI texts. In this way, the CALI model accommodates the important general education goal that students comprehend complex texts without sacrificing the need of students with LD to improve their foundational literacy skills (i.e., basic and intermediate literacy skills as defined by Shanahan and Shanahan, 2008).

Co-teachers also learn how to implement the CALI Planning Process. The process is designed to build upon each teacher's expertise—content-area (general educator) or foundational literacy (special educator). The process provides an explicit model by which teachers allocate responsibilities for planning (e.g., identifying target vocabulary words) and instruction (e.g., who will teach each component of the lesson). We hypothesize that the professional development will

improve the quantity and quality of content-area literacy instruction, co-taught instruction, support provided to students with LD, and co-planning. We anticipate that these instructional changes will lead to increases in reading outcomes, time spent on literacy, learning of academic content, and engagement in and satisfaction with content-area instruction.

This enhanced model of co-teaching takes advantage of each teacher's expertise and clearly delineates responsibilities for planning and instruction. Additionally, the teachers are trained to implement a structured, efficient planning process. The incorporation of targeted support for lower-performing students during differentiated instruction allows the needs of a greater number of students to be met in the general education setting.

Finally, we suggest that enhanced co-teaching could take place across all tiers of general education instruction. In other words, in addition to co-teaching in Tier 1 instruction, a special educator could support and deliver instruction provided in general education supplemental interventions (e.g., Tier 2). Engagement in this instruction will likely look somewhat different than at Tier 1 (e.g., teachers alternate days they provide instruction to a small group, teachers both provide small group instruction but regroup students with and without disabilities flexibly), though, adding special education support to these tiers of general education instruction may decrease the number of students who need Level 3 services.

**Level Three: Intensive Intervention with Enhanced Paraprofessional Support**

Our primary critique of extant special education service delivery models is that they lack sufficient intensity—the intensity that lies at the heart of special education and in the expectations of *Endrew*. It is almost impossible to envision how a special educator providing instruction in the general education setting or in an over-populated resource room could provide intervention that is individualized and intensive with an iterative cycle of adaptations based on

student response data. This type of intensive intervention has been referred to by multiple names—data-based program modification, clinical or experimental teaching, and data-based individualization (DBI; Fuchs, Fuchs, McMaster, & Lemons, this issue). Such a structured, iterative, data-driven process is critically needed in schools if they are to improve outcomes of students with LD. Within this level of our model, we suggest that special educators serve as expert diagnosticians and intervention designers who supervise a cadre of highly prepared paraprofessionals. Both would then share responsibility for delivering intervention to students.

DBI is the most current operationalization of intensive intervention. As described by the National Center on Intensive Intervention (www.intensiveintervention.org), the DBI process entails five steps for the teacher to follow: (1) select, intensify, and implement a validated intervention program; (2) monitor student response using data; (3) if a student demonstrates insufficient response, collect diagnostic data; (4) adapt the intervention with the aim of improving student responsiveness; and (5) continue the cycle of progress monitoring with additional diagnostic data collection and intervention adaptation as needed. Importantly, almost three decades of research has demonstrated that student outcomes are stronger when educators implement the DBI process (Fuchs & Fuchs, 1986; Fuchs, Fuchs, & Stecker, 2010; Fuchs, Fuchs, & Vaughn, 2014). A recent meta-analysis provides additional empirical support for the approach. Jung et al. (this issue) synthesized 56 effect sizes from 14 studies in which the DBI process was used to enhance student outcomes. Mean effect sizes of $g = 0.37$ and $g = 0.38$ were documented for DBI Only and DBI Plus (i.e., implementers had access to additional information on student performance beyond curriculum-based measurement while they implemented DBI), respectively.

Two additional features of DBI are worth highlighting. First, DBI provides clear guidance for educators regarding dimensions of intervention that could be adapted to enhance

student response (Step 4 in above description). Fuchs, Fuchs, and Malone (2017) provided a taxonomy of intervention intensity to operationalize the dimensions along which intervention might be intensified. They include (among others) increasing dosage, better aligning student need with instruction, attending to transfer to broader skills, and including or increasing behavioral support. Second, as many children and adolescents with LD also demonstrate co-occurring behavioral needs, the model also provides a framework for integrating academic and behavioral interventions. Kuchle et al. (2015) suggested that this feature of DBI should be considered "the next big idea in special education" (p. 150) as many extant approaches (e.g., PBIS, RTI) focus on only academics or behavior. As Burns et al. (2012) demonstrated, academic and behavioral needs co-occur and influence one another in a dynamic process.

To implement DBI with paraprofessional support, special educators would use extant assessments, on-going progress monitoring data, as well as other relevant data sources to design treatment approaches for students following the DBI framework. They would then provide explicit training and ongoing supervision and coaching to paraprofessionals. Then, the special educator and the team of trained paraprofessionals would implement the treatment approaches. Using data to monitor the student's progress and observations of the paraprofessional, the student's treatment program could be monitored and adjusted as needed by the special educator to assure maximum progress. Incorporating the paraprofessionals would extend the reach of the special educator and would allow her or him to more dynamically regroup students and to have more flexibility about who (i.e., paraprofessional, special educator) delivers the intervention.

This approach is modeled closely after the Behavior Analyst Certification Board's Registered Behavior Technician (RBT) credential. RBTs are paraprofessionals responsible for direct implementation of behavior-analytic services; they are not responsible for designing

intervention or assessment plants. A Board-Certified Behavior Analyst provides close, ongoing supervision. In our model, the special educator would similarly hold primary responsibility for providing training to the paraprofessional. Relatedly, it could be beneficial for the field to offer a related credential for paraprofessionals who would deliver Level Three interventions.

Although paraprofessionals most frequently provide support services to students with intellectual and developmental disabilities (Walker & Smith, 2015), we believe that increasing the number of paraprofessionals who support students with LD is warranted. Brock and Carter (2013) recently reviewed evidence on paraprofessional-implemented interventions for students with disabilities and showed that paraprofessionals were capable of implementing evidence-based practices with fidelity and improving student outcomes. Brock and Carter (2015) recommended that to maximize the effectiveness of these paraprofessionals, that trainers: (a) model how to implement the intervention, (b) hold the paraprofessional accountable (with support) for integrating the intervention into everyday practice (e.g., monitor fidelity of implementation), and (c) provide ongoing performance feedback to reinforce what paraprofessionals are doing well and to help them correct their mistakes.

We suggest that DBI is precisely the type of data-driven, student-focused, iterative process that is sorely missing from most special education service delivery models. Ensuring that students with LD with severe, persistent learning and behavioral needs have access to this type of intervention has the potential to dramatically improve student outcomes. Further, training and supporting paraprofessionals to deliver DBI represents one way to increase the intensity of special education services provided outside of the general education classroom.

**Summary**

Our aim of this proposed continuum of services is to enhance intervention intensity across all three levels and, importantly, to ensure that students with disabilities are provided the appropriate education required by law. We hope that our proposal has emphasized that extant models of service delivery—inclusion with minimal support, co-taught classrooms focused on one teach-one assist, unsystematic participation in general education supplemental support, and over-crowded resource rooms—are not reasonably calculated to ensure that a majority of students with LD will make progress.

**Important, Fundamental Barriers – Or, Why Our Proposal Will Not Work**

Unfortunately, our plan is almost certainly dead on arrival. The *Endrew* decision comes at a time when the conditions of public education could not be less hospitable to the changes we propose. At the time of writing, massive teacher strikes have recently taken place in multiple states (Darby, 2018, April 17). Beyond teachers' concerns with unduly low wages, outdated instructional materials, and over-populated classes, the New York Times recently ran an opinion piece describing our schools as deathtraps (Peek, 2018, April 7). Peek described too many school campuses across the country as being dilapidated, poorly designed, and blatantly unsafe. High teacher turnover and teacher shortages are commonplace, especially in schools that serve the neediest students (McCausland, Bencosme, Stoneham, & Arkin, 2018, April 8). Further, with 39% fewer people enrolling in teacher preparation programs, Darling-Hammond believes that the outlook for educators has not been this poor since the 1980s, suggesting that "We're at the nadir for the teaching profession" (McCausland et al., 2018, April 8).

We hope that this is indeed the worst it gets because the education system needs radical change if it is to meet the challenges it will face in the next decade. Hussar and Baily (2018)

projected that by 2026: (a) total public elementary and secondary enrollment will increase 2% to 40.3 million students, (b) we will need 7% more teachers to teach these students, and (d) annual expenditures just to sustain current educational supports for teachers and students will need to increase by 19% to $670 billion. Outlining a plan to address all these challenges is beyond the scope of this paper. However, we believe these issues further increase the urgency for major change if our proposed continuum (or something close to it) has a chance at implementation.

**Potential solutions—Or, could we make this work?** Although there are many solutions to the barriers that need to be addressed, we believe there are three that are the most urgent. We also think these are solutions to which leaders in the field of special education could substantively contribute. We describe these solutions and then offer a suggestion on how these solutions could be put into action.

***Increase resources.*** The principal challenge to improving special education is ensuring that sufficient resources are provided to allow school staff to deliver high-quality services across a continuum. As McAbee (2017) noted, "implementation of the guidelines established by the *Endrew F.* decision will be met by fiscal obstacles" (p. 974). He highlighted this concern by demonstrating that in fiscal year 2014 federal funding for IDEA covered approximately 16% of actual costs—well below the 40% targeted by Congress when the legislation was drafted. Given state budget shortfalls and other negative conditions we have already outlined, even the most well-resourced schools are already unable to meet students' needs. Expecting improvements in student outcomes without devoting additional resources is irrational at best, unethical at worst.

That said, we do not think our proposal necessitates a massive influx of resources to special education. In many schools, our proposal would probably require, per campus, one or two additional special educators and perhaps a few additional paraprofessionals to support students

with LD. We acknowledge that in some schools, several more staff members may be needed. This would also require schools to invest in progress monitoring systems and secondary prevention programs. Consequently, there would be many decisions individual school leaders would have to make to deploy additional resources thoughtfully. In our extensive experience working in schools, we think administrators would agree that additional resources could go to good use.

***Provide adequate teacher training.*** Related to funding is a concomitant need to improve the quality of pre-service and in-service teacher training. We recognize that a significant factor in the successful implementation of our proposal will be a community of special and general educators who have expert knowledge and skills about their content area as well as diagnostic and instructive practices for meeting the needs of students with significant learning problems. Currently, however, a majority of pre-service teachers complete their teacher training programs with a wide, but often thin, level of knowledge. An alternative would be to allow for specialization (e.g., Levels One and Two vs. Level Three). This would allow training programs to help pre-service develop deeper levels of expertise. With a specialized workforce, special educators focused on Levels One and Two would have expertise in providing supports to students served in general education settings and special educators who provide services in Level Three would have deep knowledge and experience in providing intensive intervention. Relatedly, ensuring that special educators who are trained to implement intensive intervention are also skilled at advocating for its integration into special education services will be important.

For general educators, increased exposure to effective ways to support students with disabilities and effective models to work with special educators need to be prioritized. Teacher preparation programs could further support graduates by providing one or two years of post-

graduation induction support. The Office of Special Education Programs (OSEP) should explore ways they could support these types of induction programs via training grants. Related, teacher preparation programs should consider offering intensive paraprofessional training workshops to bolster the skill set of this underutilized special education resource.

***Prioritize progress over placement.*** In our view, the primary focus of federal and state compliance monitoring has been on the location where students with disabilities receive services. *Endrew* makes it clear that student outcomes are of equal, if not greater, importance. We acknowledge that collecting data on the percentage of time students spend in the general education setting is much simpler than evaluating whether adequate progress is being achieved by students in the diverse special education population. However, if progress is not tracked as closely as placement, schools will likely continue to view student outcomes as being less important than time spent in general education. Special educators should work with monitoring agencies to develop efficient systems for tracking student progress. School administrators and educators should closely monitor student progress and evaluate whether placement changes may be needed to enhance responsiveness. One of *Endrew's* most impactful effects may be to remind IEP teams that LRE is to be determined individually for students and that academic and behavioral progress should be factored into the decision on where a student will receive services.

This also requires a shift in policy that emphasizes student progress relative to where each one begins and reflects ambitious, but possible, goals for students. We—like many readers—are strong advocates for rigorous curriculum and always strive for students to meet standards. However, we are also concerned that many states judge student growth only relative to grade-level. This is unreasonable and inappropriate for students who lack the foundational skills on which grade-level performance depends. In some states, special educators are judged

adequate only if their students with disabilities reach grade-level. This reflects laudable intent—rigor and the goal of grade-level (or above) performance—but it is in practice often absurd. We do, however, believe in holding teachers accountable for students meeting ambitious growth targets. If these are calibrated for students' ability and data are collected with sufficient frequency, teachers can maximize student potential.

Of course, this idea has often provoked the response that this would be "lowering expectations," and we have witnessed pejorative responses to arguments like ours. However, we think such responses willfully misinterpret our intent: We—like almost all educators—strongly believe in high expectations, and we want students to reach ambitious goals. We hope readers with different perspectives can see the potential value of calibrating expectations for students and thus their teachers.

**Realizing potential solutions—increase advocacy efforts.** The field of special education began when parents of children with disabilities fought for the right for their children to attend public schools. Major improvements in special education services have always depended upon strong leaders who advocate for individuals with disabilities, like Elizabeth Farrell, the founder of the Council for Exceptional Children. With the current state of education, the importance of ensuring that the rights of students with disabilities are protected is critical. None of the barriers we have outlined can be overcome without strong advocacy efforts.

All people who care about individuals with disabilities should increase efforts to play a role in our political system at the federal, state, and local levels. This is particularly true for too many academics who shirk this responsibility under the guise of playing the 'dispassionate researcher' in order to maintain objectivity. We also need to reengage family members of students with LD—perhaps by reconnecting LD with dyslexia, dyscalculia, and dysgraphia. Each

of us should reevaluate how we can increase our involvement in advocacy efforts because the stakes for not doing so are too high.

Through increased advocacy efforts, we should explore ways to increase the federal government's investment in our public-school system. Relatedly, we need to lobby state and local authorities to prioritize providing schools with the resources necessary to meet the needs of all students. We should work with school leaders to help them improve the efficiency of their service delivery models and to support them in spending funds judiciously. We need to engage with state and federal leaders to improve teacher training. And, we need to encourage compliance monitoring to place value on student progress at least as much as that of placement. Peek argued "if we legally require children to attend school, then we should be held accountable for keeping them safe there" (2018, April 7). We agree and would go further: We think our country (and no doubt others) should be obligated to ensure that all students, including those with LD, receive an education aligned with *Endrew*. Without increased advocacy efforts from key stakeholders, it is unimaginable how necessary improvements would occur.

**What Can Special Educators Do in the Meantime?**

In line with *Endrew*, we encourage special educators to familiarize themselves with the DBI process and to integrate it into extant services for students with LD who have the most intensive needs. It may be most feasible for teachers to start the process with one or two students (for examples, see Lemons, Kearns, & Davidson, 2014; Powell & Stecker, 2014). Beyond this, IEP team members will need to reexamine whether special education services for students with LD are appropriately ambitious. Prioritizing progress over placement in IEP planning may be instructive in these discussions. School administrators might also consider whether school staff are being used in the most efficient, effective manner. Co-teachers could evaluate whether they

are systematically taking advantage of each educator's expertise in a way to effectively support all students in the class. Training and supporting paraprofessionals to deliver one-on-one or small-group interventions may be another strategy. In sum, practitioners need to reflect on the alignment between extant special education services and the new *Endrew* standard, consider what changes may be necessary to reach expectations, and determine how to accomplish these changes with available resources.

**Future Directions for Research**

Additional research is needed to provide guidance on several issues related to our proposal. First, we need empirical validation for the ideas we have outlined. While we believe these approaches represent improvements over the status quo, future study is necessary to improve our understanding of the conditions in which the approaches are likely to work and provide guidance on making improvements when they are insufficient. Second, research often seeks a balance between what is feasible versus what is possible. With the increased expectations outlined by *Endrew,* researchers need to ask additional questions beyond "Does Program X work?" We also need to understand why schools continue to struggle with implementing research-based practices and to figure out how to help schools use their extant resources wisely. We also need a clearer understanding of what constitutes an "ambitious goal" for a student with LD who has severe, persistent learning needs. For students who are not expected to obtain grade-level standards, what is the expectation—one year's worth of gain for each academic year or something else? Schools need this information to evaluate their compliance with *Endrew*.

**Conclusion**

Special education services currently are insufficient to fulfill IDEA's promise of a free appropriate public education for all students with LD. In our view, this is because the focus on

providing intensive, data-driven, student-focused, individualized instruction has been lost. We proposed an improved continuum of special education services for students with LD. We also acknowledge that this model requires the test of sustained and examined implementation within school settings and that there are fundamental barriers that currently prevent many schools from achieving this continuum of services. Our primary aim in our proposal was to highlight the critical need for intensive intervention. The Office of Special Education Programs (OSEP) has recently prioritized the need to ensure that special educators have expertise in designing and delivering intensive intervention through funding of the National Center on Intensive Intervention, the National Center for Leadership in Intensive Intervention, and a cohort of related Master's training grants. We believe that the *Endrew* decision is timely and that it should prompt us as a field to reflect on how we can ensure that students with LD have access to a full continuum of services that includes access to intensive intervention.

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Figure 1. *Predominant Models of Service Delivery*

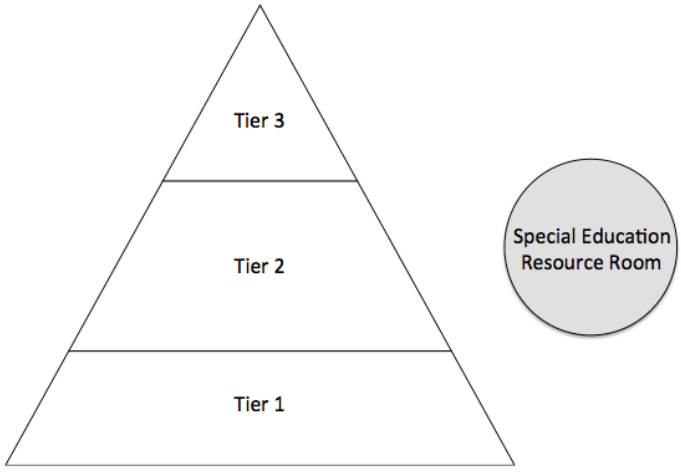


Figure 2. *An Improved Continuum of Services*